

14th IWPCTM Program Schedule
(last updated 5 September 2014)

| Time | Monday 9/1/2014 | Tuesday 9/2/2014 | Wednesday 9/3/2014 | Thursday 9/4/2014 | Friday 9/5/2014 |
|-----------|--|--|--|--|--|
| 8:20–8:30 | Welcome and Opening Remarks: <i>O. Schilling</i> | Announcements: <i>O. Schilling</i> | Announcements: <i>O. Schilling</i> | Announcements: <i>O. Schilling</i> | Announcements: <i>O. Schilling</i> |
| | Rayleigh–Taylor Experiment Session I Chair: <i>M. J. Andrews</i> (<i>Los Alamos National Laboratory</i>) | Rayleigh–Taylor and Kelvin–Helmholtz Theory and Modeling Session V Chair: <i>R. J. R. Williams</i> (<i>Atomic Weapons Establishment</i>) | Richtmyer–Meshkov Experiment Session IX Chair: <i>K. P. Prestridge</i> (<i>Los Alamos National Laboratory</i>) | Richtmyer–Meshkov Theory and Modeling Session XIII Chair: <i>D. Drikakis</i> (<i>Cranfield University</i>) | Strength, Ejecta, Particulate and EOS Session XVII Chair: <i>A. Banerjee</i> (<i>Lehigh University</i>) |
| 8:30–9:20 | Plenary Talk: Progress with Experiments on Understanding the Rayleigh–Taylor and Richtmyer–Meshkov Driven Flows for Complex Environments <i>Ranjan, D.</i> (<i>Georgia Institute of Technology</i>) | Plenary Talk: New Results and Insight into the Asymptotic Self-Similar Solutions of RT and RM Instabilities at all Dimensionalities and Density Ratios <i>Elbaz, Y., Shvarts, D.</i> (<i>Ben-Gurion University</i>) | Plenary Talk: Numerical Experiments with Shock-Turbulence Interaction: Physics and Modeling <i>Lele, S. K.</i> (<i>Stanford University</i>) | Plenary Talk: Hydrodynamic Instability and Mix Experiments for Ignition Program on National Ignition Facility <i>Smalyuk, V. A.</i> (<i>Lawrence Livermore National Laboratory</i>) | 8:30–8:55 Viscous Rayleigh Taylor Instability Experiments Using Elastic-Plastic Materials <i>Roach, P., Polavarapu, R., Banerjee, A.</i> (<i>Lehigh University</i>) 8:55–9:20 The Effect of Multiple Shocks on Ejecta Production <i>Grieves, B.</i> (<i>Atomic Weapons Establishment</i>) |
| 9:20–9:45 | Miscible and Immiscible Experiments on the Rayleigh–Taylor Instability Using Planar Laser Induced Fluorescence Visualization <i>Mokler, M., Jacobs, J.</i> (<i>University of Arizona</i>) | Spectral Modelling of Unstable Stratified Homogeneous Turbulence (USHT) <i>Gréa, B.-J., Burlot, A., Godefert, F., Cambon, C., Griffond, J., Soulard, O.</i> (<i>Commissariat à l'Energie Atomique, École Centrale de Lyon</i>) | Richtmyer–Meshkov Instability Shock Tube Experiments with a Quantified, Three-Dimensional, Random, Initial Perturbation <i>Jacobs, J., Ferguson, K., Tsiklashvili, V., Krivets, V., Sewell, E., Greenough, J.</i> (<i>University of Arizona, Lawrence Livermore National Laboratory</i>) | LES and Unsteady RANS Simulations of a Shock-Accelerated Heavy Gas Cylinder <i>Morgan, B. E., Greenough, J. A.</i> (<i>Lawrence Livermore National Laboratory</i>) | Numerical Simulation of Explosive Dispersal of Particles in Cylindrical Geometry <i>Annamalai, S., Neal, C., Ouellet, F., Rollin, B., Jackson, T. J., Balachandar, S.</i> (<i>University of Florida</i>) |

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| 9:45–10:10 | Measurement of Favre-Averaged Statistics in Variable Density Mixing of Buoyant Jets <u>Charonko, J.</u> , <u>Prestridge, K.</u> (Los Alamos National Laboratory) | A Solution to Rayleigh-Taylor Instabilities: Bubbles, Spikes, and Their Scalings <u>Mikaelian, K. O.</u> (Lawrence Livermore National Laboratory) | Simultaneous Concentration and Velocity Field Measurements in a Shock-Accelerated Mixing Layer <u>Reese, D.</u> , <u>Oakley, J.</u> , <u>Weber, C.</u> , <u>Rothamer, D.</u> , <u>Navarro, J.</u> , <u>Bonazza, R.</u> (University of Wisconsin, Madison) | Multicomponent Reynolds-Averaged Navier-Stokes Simulations of Reshocked Richtmyer-Meshkov Instability and Turbulent Mixing: Mach Number and Atwood Number Effects <u>Morán-López, J. T.</u> , <u>Schilling, O.</u> (National Nuclear Security Administration, Lawrence Livermore National Laboratory) | Experimental Acceleration Histories in a Shocked Multiphase Flow <u>Orlicz, G.</u> , <u>Martinez, A.</u> , <u>Prestridge, K.</u> (Los Alamos National Laboratory) |
| 10:10–10:35 | Experiments on the Rarefaction Wave Driven Rayleigh-Taylor Instability <u>Morgan, R.</u> , <u>Jacobs, J.</u> (University of Arizona) | Towards a Statistical Model for KH Instability in the Compressible Regime: Numerical Calculations and Experiments <u>Shimony, A.</u> , <u>Malamud, G.</u> , <u>Wan, W. C.</u> , <u>Di-Stefano, C.</u> , <u>Elbaz, Y.</u> , <u>Kuranz, C. C.</u> , <u>Klein, S. R.</u> , <u>Trantham, M. R.</u> , <u>Keiter, P. A.</u> , <u>Drake, R. P.</u> , <u>Shvarts, D.</u> (Ben-Gurion University, University of Michigan) | Effects of Shock Strength on the Single-Interface Richtmyer-Meshkov Instability <u>Wilson, B. M.</u> , <u>Mejia-Alvarez, R.</u> , <u>Prestridge, K.</u> (Los Alamos National Laboratory) | Impact of Bulk Vorticity Generated by a Rippled Shock Wave on the Evolution of Richtmyer-Meshkov Instability <u>Sano, T.</u> , <u>Nishihara, K.</u> , <u>Wouchuk, J. G.</u> (Osaka University, Universidad de Castilla-La Mancha) | Equation of State for n- Component Mixture <u>Shi, Y.</u> (Institute of Applied Physics and Computational Mathematics) |
| 10:35–10:55 | Break | Break | Break | Break | Break |
| | Rayleigh-Taylor Simulation Session II Chair: <u>A. G. W. Lawrie</u> (University of Bristol) | Rayleigh-Taylor and Kelvin-Helmholtz Theory and Modeling Session VI Chair: <u>A. Llor</u> (Commissariat à l'Energie Atomique) | Richtmyer-Meshkov Experiment and Simulation Session X Chair: <u>J. W. Jacobs</u> (University of Arizona) | High-Energy-Density Experiment Session XIV Chair: <u>D. S. Clark</u> (Lawrence Livermore National Laboratory) | Summary Discussion Session Session Chairs et al. |

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| 10:55-11:20 | Direct Numerical Simulation (DNS) and Implicit Large Eddy Simulation (ILES) of Rayleigh-Taylor Mixing <i>Youngs, D. L.</i> (Atomic Weapons Establishment) | Large-Scale Analysis of Rayleigh-Taylor Turbulence <i>Soulard, O., Griffond, J., Gréa, B.-J.</i> (Commissariat à l'Energie Atomique) | Shock-Driven Variable-Density Turbulence: New Insights <i>Reilly, D., McFarland, J., Carter, J., Ranjan, D.</i> (Georgia Institute of Technology, University of Missouri-Columbia) | Measurements of Gas/Shell Mix in Implosions at the National Ignition Facility Using the CD Symcap Platform <i>Casey, D. T., CD Mix Team</i> (Lawrence Livermore National Laboratory, Los Alamos National Laboratory, University of Rochester, Massachusetts Institute of Technology, General Atomics, Atomic Weapons Establishment) | |
| 11:20-11:45 | The Rayleigh-Taylor Instability Driven by an Accel-Decel-Accel Profile <i>Ramaprabhu, P., Karkhanis, V., Lawrie, A.</i> (University of North Carolina at Charlotte, University of Bristol) | Comparison of Two-Equation and Multi-Fluid Turbulence Models for Rayleigh-Taylor and Richtmyer-Meshkov Mixing <i>Drikakis, D., Kokkinakis, I. W., Youngs, D. L., Williams, R. J. R.</i> (Cranfield University, Atomic Weapons Establishment) | Effects of Initial Conditions on the Evolution of Richtmyer-Meshkov Instabilities <i>Mejia-Alvarez, R., Wilson, B., Prestridge, K.</i> (Los Alamos National Laboratory) | Validating Richtmyer-Meshkov and Rayleigh-Taylor Growth in National Ignition Facility Implosions <i>Peterson, J. L.</i> (Lawrence Livermore National Laboratory) | |
| 11:45-12:10 | The Tilted Rocket Rig: Numerical Modelling in 2D and 3D <i>Brown, M. A., Batha, C. A., Williams, R. J. R., Youngs, D. L.</i> (Atomic Weapons Establishment) | Exact Statistical Results for Binary Mixing and Reaction in Variable Density Turbulence (VDT) <i>Ristorcelli, J. R.</i> (Los Alamos National Laboratory) | 3D Numerical Analysis of the RM Evolution Under Reshock Conditions <i>Malamud, G., Leinov, E., Elbaz, Y., Sadot, O., Ben-Dor, G., Shvarts, D.</i> (Ben-Gurion University) | High-Energy-Density Supersonic Counterflowing Shear Experiments on OMEGA and the NIF <i>Doss, F. W., Flippo, K. A., Kline, J. L., Perry, T. S., DeVolder, B. G., Tregillis, I., Merritt, E. N., Hager, J.</i> (Los Alamos National Laboratory) | Closing Remarks: <i>O. Schilling</i> |
| 12:10-13:30 | Lunch | Lunch | Lunch | Lunch | |
| | Rayleigh-Taylor Simulation Session III Chair: <i>D. Livescu</i> (Los Alamos National Laboratory) | Rayleigh-Taylor and Richtmyer-Meshkov Theory and Modeling Session VII Chair: <i>K. O. Mikaelian</i> (Lawrence Livermore National Laboratory) | Richtmyer-Meshkov Simulation Session XI Chair: <i>D. L. Youngs</i> (Atomic Weapons Establishment) | High-Energy-Density Simulation Session XV Chair: <i>O. Schilling</i> (Lawrence Livermore National Laboratory) | |

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| 13:30–13:55 | Effect of Initial Conditions on Late-Time Evolution to Turbulence of Rayleigh Taylor Instability Under Variable Acceleration Histories <i>Aslangil, D., Lawrie, A., Banerjee, A.</i> (Lehigh University, University of Bristol) | Progress on Multicomponent Reynolds-Averaged Navier-Stokes Model Development and Validation for Rayleigh–Taylor and Reshocked Richtmyer–Meshkov Turbulent Mixing <i>Schilling, O.</i> (Lawrence Livermore National Laboratory) | Modifying Shock-Driven Turbulent Mixing Through the Spectral Content of Initial Interface Perturbations <i>Nelson, N. J., Grinstein, F. F.</i> (Los Alamos National Laboratory) | Detailed 3-D Simulations of High-Convergence Ignition Implosion Experiments on the National Ignition Facility <i>Clark, D. S. et al.</i> (Lawrence Livermore National Laboratory) | |
| 13:55–14:20 | Rayleigh-Taylor Instability Driven by Time-Varying Acceleration <i>Ramaprabhu, P. (for Khan, M.)</i> (Jadavpur University) | A Dynamical Systems Approach to the Alpha Problem for Rayleigh-Taylor <i>Israel, D. M.</i> (Los Alamos National Laboratory) | Reshock of Self-Similar Multimode Richtmyer–Meshkov Instability at High Atwood Number <i>Probyn, M., Thornber, B., Aspden, A., Drikakis, D.</i> (Cranfield University) | 3D Simulations of OMEGA-Type ICF Capsules <i>Haines, B. M., Grinstein, F. F., Fincke, J. R.</i> (Los Alamos National Laboratory) | |
| 14:20–14:45 | On the Role of a Pre-Existing Turbulent Field in the Development of a Mixing Region in the Presence of an Acceleration Field <i>Movahed, P., Johnsen, E.</i> (University of Michigan) | | A Numerical Study of the Two and Three Dimensional Richtmyer Meshkov Instability <i>Thornber, B., Zhou, Y.</i> (University of Sydney, Lawrence Livermore National Laboratory) | 2D Simulations of CD Mix Capsules <i>Pino, J. et al.</i> (Lawrence Livermore National Laboratory) | |
| 14:45–15:10 | Turbulent Mixing at the Microscale <i>Glimm, J.</i> (Stony Brook University) | | Large-Eddy Simulation Requirements for the Richtmyer–Meshkov Instability <i>Olson, B., Greenough, J.</i> (Lawrence Livermore National Laboratory) | Some Recent Studies of Hydrodynamic Instabilities Relative to Ignition Implosion <i>Ye, W., Wu, J., Wang, L., Liu, W., Guo, H.</i> (Institute of Applied Physics and Computational Mathematics) | |
| 15:10–15:30 | Break | Break | Break | Break | |
| | Rayleigh–Taylor Simulation Session IV Chair: <i>J. G. Glimm</i> (Stony Brook University) | Poster Session VIII | Richtmyer–Meshkov and Shock–Turbulence Simulation Session XII Chair: <i>S. K. Lele</i> (Stanford University) | High-Energy-Density Theory and Modeling Session XVI Chair: <i>W. Ye</i> (Institute of Applied Physics and Computational Mathematics) | |

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| 15:30–15:55 | The Internal Structure of Stratified Rayleigh-Taylor Instability <i>Davies Wykes, M., Lawrie, A., Dalziel, S.</i> (University of Cambridge, University of Bristol) | | Statistics of Turbulent Mixing <i>Williams, R. J. R., Batha, C. A.</i> (Atomic Weapons Establishment) | Modeling Ablation Front Instabilities and Mixing in ICF <i>Weber, C., Clark, D., Cook, A., Robey, H.</i> (Lawrence Livermore National Laboratory) | |
| 15:55–16:20 | Generalized Cahn-Hilliard Navier-Stokes Equations for Numerical Simulations of Flows with Immiscible Fluids <i>Li, Z., Livescu, D.</i> (Los Alamos National Laboratory) | | DNS and LIA Analysis of the Shock-Turbulence Interaction <i>Livescu, D., Ryu, J.</i> (Los Alamos National Laboratory, University of California, Berkeley) | Effects of Instabilities and Adiabat in NIF Experiments <i>Cheng, B.</i> (Los Alamos National Laboratory) | |
| 16:20–16:45 | Towards Adaptive Unstructured ALE Methods for Turbulent Flows <i>Lawrie, A., Nahon, J.</i> (University of Bristol) | | Numerical Simulations of Chemically Reacting Richtmyer Meshkov Instability in H ₂ -O ₂ Flames <i>Attal, N., Varschogi, H., Ramaprabhu, P.</i> (University of North Carolina at Charlotte) | Plasma Transport in RT and KH Instabilities (ICF Conditions) <i>Haines, B., Vold, E., Molvig, K., Rauenzahn, R., Aldrich, C.</i> (Los Alamos National Laboratory) | |
| 16:45–17:10 | DNS Study of Compressible Turbulent Mixing by Rayleigh-Taylor Instability <i>Tian, B., Zhang, Y., Li, X.</i> (Institute of Applied Physics and Computational Mathematics, State Key Laboratory for High-Temperature Gas Dynamics) | | A Difference Scheme for Lagrangian Hydrodynamics in 2D Cylindrical Geometry <i>Li, J.</i> (Institute of Applied Physics and Computational Mathematics) | | |
| 17:10–17:40 | Discussion: Rayleigh-Taylor Experiment and Simulation Chairs: <i>D. Ranjan and D. L. Youngs</i> | Discussion: Rayleigh-Taylor, Richtmyer-Meshkov and Kelvin-Helmholtz Theory and Modeling Chairs: <i>D. Shvarts and A. Llor</i> | Discussion: Richtmyer-Meshkov Experiment and Simulation Chairs: <i>R. Bonazza and B. Thornber</i> | Discussion: HED Experiment, Simulation and Modeling Chair: <i>V. Smalyuk</i> | |
| 19:00–21:00 | | Banquet: Morton's the Steakhouse | | | |